

Ref

# OPINIONS AND DECLARATIONS RENDERED BY THE INTER- NATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

*Edited by*

**FRANCIS HEMMING, C.M.G., C.B.E.**

Secretary to the Commission

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## OPINION 331

Designation, under the Plenary Powers, of a lectotype  
for the nominal species *Asterias quinqueloba* Goldfuss,  
1831 (Class Asteroidea) in harmony with accustomed  
nomenclatorial usage



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# INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

## COMPOSITION AT THE TIME OF THE ADOPTION OF THE RULING GIVEN IN OPINION 331

### A. The Officers of the Commission

*Honorary Life President* : Dr. Karl Jordan (*British Museum (Natural History), Zoological Museum, Tring, Herts., England*).

*President* : (Vacant).

*Vice-President* : Senhor Dr. Afranio do Amaral (*Sao Paulo, Brazil*).

*Secretary* : Mr. Francis Hemming (*London, England*).

### B. The Members of the Commission

(arranged in order of precedence by reference to date of election or of most recent re-election, as prescribed by the International Congress of Zoology).

Senhor Dr. Afranio do AMARAL (*S. Paulo, Brazil*) (*Vice-President*) (1st January 1944).

Professor J. R. DYMOND (*University of Toronto, Toronto, Canada*) (1st January 1944).

Professor J. Chester BRADLEY (*Cornell University, Ithaca, N.Y., U.S.A.*) (28th March 1944).

Professor Harold E. VOKES (*Johns Hopkins University, Baltimore, Maryland, U.S.A.*) (23rd April 1944).

Dr. William Thomas CALMAN (*Coulsdon, Surrey, England*) (1st January 1947).

Professor Béla HANKÓ (*Békéscsaba, Hungary*) (1st January 1947).

Dr. Norman R. STOLL (*Rockefeller Institute for Medical Research, New York, N.Y., U.S.A.*) (1st January 1947).

Professor H. BOSCHMA (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) (1st January 1947).

Senor Dr. Angel CABRERA (*Eva Peron, F.C.N.G.R., Argentina*) (27th July 1948).

Mr. Francis HEMMING (*London, England*) (*Secretary*) (27th July 1948).

Dr. Joseph PEARSON (*Tasmanian Museum, Hobart, Tasmania, Australia*) (27th July 1948).

Dr. Henning LEMCHE (*Universitetets Zoologiske Museum, Copenhagen, Denmark*) (27th July 1948).

Professor Teiso ESAKI (*Kyushu University, Fukuoka, Japan*) (17th April 1950).

Professor Pierre BONNET (*Université de Toulouse, France*) (9th June 1950).

Mr. Norman Denbigh RILEY (*British Museum (Natural History), London*) (9th June 1950).

Professor Tadeusz JACZEWSKI (*Department of Systematic Zoology, Warsaw University, Warsaw, Poland*) (15th June 1950).

Professor Robert MERTENS (*Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M., Germany*) (5th July 1950).

Professor Erich Martin HERING (*Zoologisches Museum der Humboldt-Universität zu Berlin, Germany*) (5th July 1950).

## OPINION 331

DESIGNATION, UNDER THE PLENARY POWERS, OF A LECTOTYPE FOR THE NOMINAL SPECIES " *ASTERIAS QUINQUELOBA* " GOLDFUSS, 1831 (CLASS ASTEROIDEA) IN HARMONY WITH ACCUSTOMED NOMENCLATORIAL USAGE

**RULING** :—(1) Under the Plenary Powers, (a) all selections of lectotypes for the nominal species *Asterias quinqueloba* Goldfuss, 1831 (Class Asteroidea) made prior to the present Ruling are hereby set aside, and (b) the specimen illustrated as sub-figure " u ", one of the component ossicles of which is represented, enlarged in subfigure " t ", of figure 5 on plate 63 in volume 1 of Goldfuss (G.A.), 1831, *Petrefacta Germaniae* is hereby designated to be the lectotype of the foregoing species.

(2) The under-mentioned generic names are hereby placed on the *Official List of Generic Names in Zoology* as Name Nos. 799 to 801 respectively :—(a) *Crateraster* Spencer, 1913 (gender : masculine) (type species, by original designation : *Asterias quinqueloba* Goldfuss, 1831, the species so named to be defined by the lectotype designated, under the Plenary Powers, under (1)(b) above) ; (b) *Metopaster* Sladen, 1893 (gender : masculine) (type species, by selection by Rasmussen (1950) : *Goniaster* (*Goniodiscus*) *parkinsoni* Forbes, 1848) ; (c) *Valettaster* Lambert, 1914 (gender : masculine) (type species, by selection by Rasmussen (1950) : *Oreaster ocellatus* Forbes, 1848).

(3) The under-mentioned specific names are hereby placed on the *Official List of Specific Names in Zoology* as Name Nos. 238 to 240 respectively :—(a) *ocellatus* Forbes, 1848, as published in the combination *Oreaster ocellatus* (specific name of type species of *Valettaster* Lambert, 1914) ; (b) *parkinsoni* Forbes, 1848, as published

in the combination *Goniaster* (*Goniodiscus*) *parkinsoni* (specific name of type species of *Metopaster* Sladen, 1893) ; (c) *quinqueloba* Goldfuss, 1831, as published in the combination *Asterias quinqueloba*, as defined by the lectotype designated, under the Plenary Powers, under (1)(b) above (specific name of type species of *Crateraster* Spencer, 1913).

(4) The under-mentioned generic names are hereby placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* as Name Nos. 210 and 211 respectively :—(a) *Tholaster* Spencer, 1913 (a junior homonym of *Tholaster* Seunes, 1891) ; (b) *Tholasterina* Valette, 1915 (a junior objective synonym of *Valettaster* Lambert, 1914).

#### I.—THE STATEMENT OF THE CASE

On 31st January 1951, Mr. C. W. Wright (*London*) submitted an application for the designation, under the Plenary Powers, of a lectotype for the nominal species *Asterias quinqueloba* Goldfuss, 1831 (Class Asteroidea), in harmony with accustomed nomenclatorial usage. A slight revision of the form of this application was required in order to bring the request submitted in this case into line with the instructions given to the Commission by the Thirteenth International Congress of Zoology, Paris, 1948, regarding the placing on the *Official Lists* and *Official Indexes* of names involved in applications submitted to it for decision. The application, so revised, was as follows :—

**Proposed use of the Plenary Powers to designate a lectotype for the nominal species “*Asterias quinqueloba*” Goldfuss, 1831 (Class Asteroidea) in harmony with currently accepted nomenclatorial practice**

By C. W. WRIGHT (*London*)

1. The object of the present application is to invite the International Commission on Zoological Nomenclature to use its Plenary Powers

to designate a lectotype for the nominal species *Asterias quinqueloba* Goldfuss, 1831 (Class Asteroidea) in order to avoid the serious confusion and disturbance in current nomenclatorial practice which would inevitably follow any attempt strictly to apply the normal provisions of the *Règles* in this case. It is hoped that it will be possible for the International Commission to give an early decision on the present application, since that decision is urgently required in connection with the preparation of the relevant portion of the forthcoming *Treatise on Invertebrate Paleontology*. The details relating to this case are set out in the following paragraphs.

2. The generic name *Metopaster* was published by Sladen in 1893 (*in* Sladen & Spencer *in* Wright, 1893, *Brit. foss. Echinod. cret. Formations* 2 (2) : 30). Sladen did not designate or indicate a type species for the genus so named, to which he assigned eight nominal species. In practice, the first of these species, *Goniaster (Goniodiscus) parkinsoni* Forbes, 1848 (*Mem. geol. Survey Great Britain* 2 : 472) has been generally regarded by subsequent workers as typifying this genus, but neither it nor any other species was selected under Rule (g) in Article 30, until in 1950 Rasmussen (*Dansk. geol. Unders.* 2 (No. 77) : 16) selected this species to be the type species.

3. Spencer in 1913 (*Phil. Trans. Roy. Soc. (B)* 204 : 120) published the generic name *Crateraster*. He assigned two nominal species to the genus so named and one of these, *Asterias quinqueloba* Goldfuss, 1831, he designated as the type species.

4. At the time when the name *Asterias quinqueloba* was first published, Goldfuss (1831, *Petref. German.* 1 : 209 pl. 63) gave under his figure 5 reproductions of a considerable number of individual marginalia. Goldfuss' figures were examined in detail in 1907 by Spencer who came to the conclusion that three species were involved, namely : (1) *Goniaster (Goniodiscus) parkinsoni* Forbes, 1848, to which he assigned sub-figures "a" to "p" of Goldfuss' figure 5 ; (2) *Oreaster ocellatus* Forbes, 1848, *Mem. geol. Survey Great Britain* 2 : 468, to which he assigned Goldfuss' sub-figures "q" to "r" ; (3) *Pentagonaster megaloplax* Sladen, 1891, to which he assigned Goldfuss' sub-figures "s" to "u". These three species were by this time regarded as belonging to three different genera, the first to *Metopaster* Sladen, 1893, the second to *Stauranderaster* Spencer, 1907 (*in* Sladen & Spencer *in* Wright, *Brit. foss. Echinod. Cret. Formations* 2 (4) : 99, 125) (of which *Oreaster boysi* Forbes, 1848, *Mem. geol. Survey Great Britain* 2 : 468, is the type species, by original designation), the third to *Pentagonaster* Schulze, 1760 (*Verst. Seest.* : 51). At the conclusion of his review Sladen selected Goldfuss' sub-figures "t" and "u" to represent the lectotype of *Asterias quinqueloba* Goldfuss, 1831. The effect of this action was to reduce the trivial name



*megaloplax* Sladen to the status of a junior subjective synonym of the trivial name *quinqueloba* Goldfuss, 1831.

5. Unfortunately, in making the foregoing lectotype selection for *Asterias quinqueloba* Goldfuss, Spencer overlooked the fact that on page 209 of his work Goldfuss had added, with reference to sub-figures "s", "t" and "u" included in his figure 5, the words "Assulae marginales specierum affinium", thus indicating that the marginalia so figured were referable not to his *Asterias quinqueloba* but to allied but distinct species. Accordingly, under Rule (e) of Article 30, as applied to specific trivial names by Article 31, the above sub-figures are ineligible for selection to represent the lectotype of *Asterias quinqueloba* Goldfuss, the marginalia so figured not having been referred to this nominal species by Goldfuss when he first published the specific name *Asterias quinqueloba*. Thus, Spencer's selection of these marginalia to represent the lectotype of this species is invalid under the *Règles*.

6. Spencer's lectotype selection has been followed by subsequent workers, no one subsequently having made any other such selection. Now that that selection is seen to be invalid, it is necessary to consider what would be the effect of making either of the two selections which alone are possible under Article 31—a provision which, it may usefully be recalled, was greatly clarified by the International Congress of Zoology in 1948 (see 1950, *Bull. zool. Nomencl.* 4 : 73—76). The possible choices are either (1) one of the marginalia figured by Goldfuss as sub-figures "a" to "p", or (2) the marginalia figured by that author as sub-figures "q" and "r". If the first course were to be adopted, the species represented by the nominal species *Asterias quinqueloba* Goldfuss would become subjectively identical with that represented by the nominal species *Goniaster (Goniodiscus) parkinsoni* Forbes, 1848, while if the second course were to be adopted, Goldfuss' species would become subjectively the same as *Oreaster ocellatus* Forbes, 1848 (now known as *Valettaster ocellatus* (Forbes, 1848)). Thus, at the species level the adoption of the first of these courses would be to make the trivial name *parkinsoni* Forbes, 1848, a junior subjective synonym of the trivial name *quinqueloba* Goldfuss, 1831, while the adoption of the second of these courses would be to make the trivial name *ocellatus* Forbes, 1848, a junior subjective synonym of Goldfuss' *quinqueloba*. In either case, the species which for the last forty-four years has been known as *Crateraster quinqueloba* (Goldfuss, 1831) would be deprived of its accustomed trivial name and would have to bear the trivial name *megaloplax* Sladen, 1891, a name which (as already explained) has been treated as a synonym ever since the publication of Spencer's paper of 1907.

7. The effects of either of the foregoing lectotype selections for *Asterias quinqueloba* Goldfuss would be equally disastrous at the genus level :—

- (1) If the first of the foregoing courses were to be adopted and, in consequence, it were necessary subjectively to identify *Asterias quinqueloba* Goldfuss, 1831 (the type species of *Crateraster* Spencer, 1913) with *Goniaster* (*Goniodiscus*) *parkinsoni* Forbes, 1848 (the type species of *Metopaster* Sladen, 1893), the generic name *Crateraster* Spencer would become a subjective junior synonym of *Metopaster* Sladen.
- (2) If the second of the foregoing courses were to be adopted and, in consequence, it were necessary subjectively to identify *Asterias quinqueloba* Goldfuss, 1831 (the type species of *Crateraster* Spencer, 1913) with *Oreaster ocellatus* Forbes, 1848, the name *Crateraster* Spencer, 1913, would become a subjective senior synonym of, and would replace, the name *Valettaster* Lambert, 1914 (*Rév. crit. Paléozool.* 1914 : 27) of which *Oreaster ocellatus* Forbes, 1848, is the type species. (The name *Valettaster* Lambert was published as a nom. nov. pro *Tholaster* Spencer, 1913 (*Phil. Trans. roy. Soc. (B)* 204 : 137), which is invalid, because it is a junior homonym of the name *Tholaster* Seunes, 1891, *Bull. Soc. géol. France* (3) 19 : 23. The name *Tholasterina* Valette, 1915 (*Bull. Soc. Sci. hist. nat. Yonne* 68 (2) : 57), also proposed as a nom. nov. pro *Tholaster* Spencer, 1913, is invalid, being a junior objective synonym of *Valettaster* Lambert, 1914.)

8. It will be seen from the foregoing particulars that whatever lectotype were to be selected for *Asterias quinqueloba* Goldfuss, great confusion would necessarily ensue, for (1) in either case it would be necessary to transfer the trivial name *quinqueloba* Goldfuss from the species which has borne that name for the last forty-four years and to apply it to a species belonging to a different genus, and (2) it would be necessary either to transfer the name *Metopaster* Sladen from the genus for which it has always been used to the genus known ever since 1913 as *Crateraster* Spencer, or to transfer the name *Crateraster* Spencer from the genus for which it has always been used to the genus known since 1914 as *Valettaster* Lambert. Either of these results would be open to very strong objection, all the more so because the species concerned are among the commonest species of the Cretaceous of North-Western Europe and have frequently been recorded in the literature of the Chalk.

9. For the foregoing reasons the present seems to be a pre-eminently suitable case for the use by the International Commission on Zoological Nomenclature of its Plenary Powers for the purpose of preventing

confusing changes in nomenclature, having regard especially to the fact that the avoidance of transfers of names (either generic names or trivial names) from one taxonomic unit to another is specifically cited among the purposes for which the International Congress of Zoology conferred the Plenary Powers upon the International Commission (see *Declaration 5*, published in 1943, *Opinions and Declarations rendered by the International Commission on Zoological Nomenclature* 1 : 31—40).

10. I accordingly request the International Commission on Zoological Nomenclature :—

- (1) to use its Plenary Powers (a) to set aside all selections of lectotypes for the nominal species *Asterias quinqueloba* Goldfuss, 1831, made prior to the decision now proposed to be taken, and (b) to designate sub-figures “t” and “u” of figure 5 on plate 63 in volume 1 of Goldfuss (G.A.), *Petrefacta Germaniae* to represent the lectotype of the foregoing nominal species ;
- (2) to place the under-mentioned generic names on the *Official List of Generic Names in Zoology* :—
  - (a) *Crateraster* Spencer, 1913 (type species, by original designation : *Asterias quinqueloba* Goldfuss, 1831, as proposed, under (1)(b) above, to be defined under the Plenary Powers) (gender of generic name : masculine) ;
  - (b) *Metopaster* Sladen, 1893 (type species, by selection by Rasmussen, 1950 : *Goniaster (Goniodiscus) parkinsoni* Forbes, 1848) (gender of generic name : masculine) ;
  - (c) *Stauranderaster* Spencer, 1907 (type species, by original designation : *Oreaster boysi* Forbes, 1848) (gender of generic name : masculine) ;
  - (d) *Valettaster* Lambert, 1914 (type species, by selection, by Rasmussen, 1950 : *Oreaster ocellatus* Forbes, 1848) (gender of generic name : masculine) ;
- (3) to place the under-mentioned generic names on the *Official Index of Rejected and Invalid Generic Names in Zoology* :—
  - (a) *Tholaster* Spencer, 1913 (a junior homonym of *Tholaster* Seunes, 1891) ;
  - (b) *Tholasterina* Valette, 1915 (a junior objective synonym of *Valettaster* Lambert, 1914) ;



(4) to place the under-mentioned trivial names on the *Official List of Specific Trivial Names in Zoology* :—

- (a) *boysi* Forbes, 1848, as published in the binominal combination *Oreaster boysii* (trivial name of type species of *Stauranderaster* Spencer, 1907) ;
- (b) *ocellatus* Forbes, 1848, as published in the binominal combination *Oreaster ocellatus* (trivial name of type species of *Valettaster* Lambert, 1914) ;
- (c) *parkinsoni* Forbes, 1848, as published in the combination *Goniaster (Goniodiscus) parkinsoni* (trivial name of type species of *Metopaster* Sladen, 1893) ;
- (d) *quinqueloba* Goldfuss, 1831, as published in the binominal combination *Asterias quinqueloba*, as proposed, under (1)(b) above, to be defined under the Plenary Powers (trivial name of type species of *Crateraster* Spencer, 1913).

## II.—THE SUBSEQUENT HISTORY OF THE CASE

**2. Registration of the present application :** On the receipt of Mr. Wright's application, the question of the identity of the taxonomic species to be accepted as being represented by the nominal species *Asterias quinqueloba* Goldfuss, 1831, was allotted the Registered Number Z.N.(S.) 514.

**3. Publication of the present application :** The present application was sent to the printer in March 1951 and was published on 28th September 1951 in Part 4 of volume 6 of the *Bulletin of Zoological Nomenclature* (Wright, 1951, *Bull. zool. Nomencl.* 6 : 106—110).

**4. Issue of Public Notices :** Under the revised arrangements prescribed by the Thirteenth International Congress of Zoology, Paris, 1948 (1950, *Bull. zool. Nomencl.* 4 : 50—56), Public Notice of the possible use by the International Commission on Zoological Nomenclature of its Plenary Powers in the present case was

issued on 28th September 1951, both in Part 4 of volume 6 of the *Bulletin of Zoological Nomenclature* (the Part in which Mr. Wright's application had been published) and also to the other prescribed serial publications. The publication of these Notices elicited no objection to the action proposed.

**5. Withdrawal of the proposal in relation to the name "Stauranderaster" Spencer, 1907 :** On 12th October 1951, Mr. Wright notified the Commission that, since the submission of his application, he had discovered that the generic name *Stauranderaster* Spencer, 1907, was to be regarded as a junior subjective synonym of *Aspidaster* de Loriol, 1884. Mr. Wright accordingly asked leave to withdraw the proposal which he had submitted in regard to the former of these names.

**6. Support received from the Joint Committee on Zoological Nomenclature for Paleontology in America :** In the following letter dated 18th February 1952 (received on 9th April 1952) Professor G. Winston Sinclair (then of the *University of Michigan, Ann Arbor, Michigan, U.S.A.*), Chairman of the Joint Committee on Zoological Nomenclature for Paleontology in America, reported that by ten votes to one the members of the Joint Committee had decided to support the present application :—

The Joint Committee on Zoological Nomenclature for Paleontology in America has considered this subject, and I wish to inform you that, being polled, they voted : To support the petition (ten) :—(1) R. C. Moore ; (2) J. Marvin Weller ; (3) A. Myra Keen ; (4) Katherine V. W. Palmer ; (5) Don L. Frizzell ; (6) Bryan Patterson ; (7) G. Winston Sinclair ; (8) Bobb Schaeffer ; (9) Siemon W. Muller ; (10) John B. Reeside, Jr. To oppose the petition (one) :—John W. Wells.

### III.—THE DECISION OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

**7. Issue of Voting Paper V.P.(52)55 :** On 22nd May 1952 a Voting Paper (V.P.(52)55) was issued to the Commission in

regard to the present application. In a note annexed to this Voting Paper the Secretary, after giving the customary particulars regarding compliance with the regulations relating to the issue of Public Notices (paragraph 4 above) and comments received on this application (paragraph 6 above) reported the withdrawal by Mr. Wright of his proposals relating to the name *Stauranderaster* Spencer, 1907 (paragraph 5 above). Mr. Hemming noted that effect could be given to the main portion of Mr. Wright's proposal, if such were to be the desire of the Commission, by excepting from the proposal submitted the individual proposals numbered as Points (2)(c) and (4)(a) in the summary furnished by Mr. Wright at the end of his application. Accordingly, in the Voting Paper referred to above, the Members of the Commission were invited to vote either for, or against, the proposal "relating to the name *Asterias quinqueloba* Goldfuss, 1831, as set out in Points (1), (2) (a), (b) and (d), (3) and (4)(b) to (d) in paragraph 10 at the foot of page 109 and continued on page 110 of volume 6 of the *Bulletin of Zoological Nomenclature*" [i.e., the whole of the proposals submitted by Mr. Wright in paragraph 10 of the application reproduced in the first paragraph of the present *Opinion*, except the proposals numbered in that paragraph as proposals (2)(c) and (4)(a)].

**8. The Prescribed Voting Period :** As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 22nd August, 1952.

**9. Particulars of the Voting on Voting Paper V.P.(52)55 :** The state of the voting on Voting Paper V.P.(52)55 at the close of the Prescribed Voting Period was as follows :—

(a) *Affirmative Votes had been given by the following fifteen (15) Commissioners (arranged in the order in which Votes were received) :*

Calman ; Hering ; Dymond ; Hankó ; Bonnet ;  
Vokes ; Bradley ; do Amaral ; Hemming ; Esaki ;  
Riley ; Lemche ; Pearson ; Stoll ; Boschma ;

(b) *Negative Votes* :

None ;

(c) *Voting Paper not returned by three (3)* :Cabrera<sup>1</sup> ; Jaczewski ; Mertens.

**10. Declaration of Result of Vote :** On 23rd August 1952, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(52)55, signed a Certificate that the Votes cast were as set out in paragraph 9 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

**11. Definition of the lectotype for the nominal species “*Asterias quinqueloba*” designated by the Ruling given in the present “Opinion” :** After the close of the Fourteenth International Congress of Zoology, Copenhagen, 1953, Mr. Hemming, as Secretary to the Commission, decided that, before the preparation of a Ruling on any subject on which a vote had been taken prior to the meeting of the foregoing Congress, the wording employed in the proposal so voted upon ought to be examined in the light of the amendments of the *Règles* made by the Copenhagen Congress, in order to make sure that that decision was in harmony with those amendments. Those amendments were not, as yet, formally in operation, but the Congress, while protecting decisions already reached by the Commission, had asked the Commission to guide itself generally in the light of those amendments during the interim period between the close of the Copenhagen Congress and the formal entry into force of the Revised text of the *Règles* adopted by it. When, under the procedure explained above, Mr. Hemming examined the decision taken in the present case, he took the view that the wording of that decision required review

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<sup>1</sup> After the close of the Prescribed Voting Period, an affirmative vote was received (on 1st September 1952) from Commissioner Cabrera.

from two points of view : (1) In order to harmonise that decision with the amendments to the *Règles* made by the Copenhagen Congress in regard to type specimens, it was necessary to confine the lectotype selection for the nominal species *Asterias quinqueloba* Goldfuss to a single figure instead of basing it (as till then proposed) upon two figures, unless there was clear evidence that the two figures in question represented the same specimen. (2) It would be more consistent with the spirit of the Copenhagen decisions to designate as the lectotype the specimen illustrated by whichever of Goldfuss' figures was chosen for that purpose rather than to designate that figure "to represent the lectotype". Accordingly, on 11th May 1954, Mr. Hemming wrote a letter to Mr. Wright, as the applicant in this case, asking for his views on the foregoing points. In his reply dated 14th May 1954 Mr. Wright agreed that the change in wording indicated in (2) above was an improvement, and, as regards point (1) above, explained that of the two sub-figures (sub-figs. "t" and "u") cited in the application, the first (*i.e.*, sub-fig. "t") represented an enlarged view of one of the ossicles illustrated in the second sub-figure (sub fig. "u") and therefore that both the sub-figures concerned represented portions of the same specimen. In the light of Mr. Wright's reply, it was evident that all that was required on this subject was the insertion in the Ruling of words making it clear that the two sub-figures published by Goldfuss represented the same specimen.

#### 12. Preparation of the Ruling given in the present "Opinion" :

On 15th May 1954, Mr. Hemming prepared the Ruling given in the present *Opinion* and at the same time signed a Certificate that the terms of that Ruling were in complete accord with those of the proposal approved by the International Commission in its Vote on Voting Paper V.P.(52)55, subject to the two drafting amendments specified in paragraph 11 above.

13. The following are the original references for the names placed on the *Official Lists* and *Official Indexes* by the Ruling given in the present *Opinion* :—

- Crateraster* Spencer, 1913, *Phil. Trans. Roy. Soc. (B)* **204** : 120  
*Metopaster* Sladen, 1893, in Sladen & Spencer in Wright, *Brit. foss. Echinoderm. cret. Formations* **2** (2) : 30



- ocellatus*, *Oreaster* Forbes, 1848, *Mem. geol. Surv. Great Brit.* **2** : 468  
*parkinsoni*, *Goniaster* (*Goniodiscus*), Forbes, 1848, *Mem. geol. Surv. Great Brit.* **2** : 472  
*quinqueloba*, *Asterias*, Goldfuss, 1831, *Petref. German.* **1** : 209, pl. 63, fig. 5, sub-figs "u" "t"  
*Tholaster* Spencer, 1913, *Phil. Trans. Roy. Soc. (B)* **204** : 137  
*Tholasterina* Valette, 1915, *Bull. Soc. Sci. hist. nat. Yonne* **68** (2) : 57  
*Valettaster* Lambert, 1914, *Rev. crit. Paleozool.* **1914** : 27

14. The following are the references for the selection of type species of the under-mentioned genera referred to in the Ruling given in the present *Opinion* :—

- For *Metopaster* Sladen, 1893 : Rasmussen, 1950, *Dansk. geol. Unders.* **2** (No. 77) : 16  
 For *Valettaster* Lambert, 1914 : Rasmussen, 1950, *Dansk. geol. Unders.* **2** (No. 77) : 93

15. The application dealt with in the present *Opinion* was published in the *Bulletin of Zoological Nomenclature* prior to the establishment of the *Official List of Family-Group Names in Zoology* by the Fourteenth International Congress of Zoology, Copenhagen, 1953. It has not been possible since then to deal with this aspect of the present case. This question is, however, now being examined on a separate File to which the Registered Number Z.N.(G.) 75 has been allotted.

16. At the time of the adoption of the Ruling given in the present *Opinion*, the expression prescribed for the second portion of the binomen which constitutes the scientific name of a species was the expression "trivial name" and the *Official List* reserved for recording such names was styled the *Official List of Specific Trivial Names in Zoology*, the word "trivial" appearing also in the title of the *Official Index* reserved for recording rejected and invalid names of this category. Under a decision taken by the Fourteenth International Congress of Zoology, Copenhagen, 1953, the expression "specific name" was substituted for the

expression "trivial name" and corresponding changes were made in the titles of the *Official List* and *Official Index* of such names (1953, *Copenhagen Decisions zool. Nomencl.* : 21). The changes in terminology so adopted have been incorporated in the Ruling given in the present *Opinion*.

17. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Opinion* is accordingly hereby rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.

18. The present *Opinion* shall be known as *Opinion* Three Hundred and Thirty-One (331) of the International Commission on Zoological Nomenclature.

DONE in London, this Fifteenth day of May, Nineteen Hundred and Fifty-Four.

*Secretary to the International Commission  
on Zoological Nomenclature*

**FRANCIS HEMMING**

